

JIRA - 00-7257-27

DEPT. OF TRANSPORTATION

00 APR 20 AM 10:49

**Railroad Operating Practices  
Blue Signal Protection of Workmen  
RSAC**

**Background:** FRA believes that it is necessary to consider rulemaking changes to 49 CFR Part 218, Subpart B, and Part 221. These parts contain minimum Federal standards considered essential for the protection of employees engaged in the inspection, testing, repair and servicing of rolling equipment. This issue paper considers recommendations by field personnel and RSAC participants to modify the current regulations to enhance the overall safety of the railroad environment. The following suggested modifications are under consideration:

- (1) Inclusion of Contractors;
- (2) Visibility;
- (3) One Person Crews.
- (4) Locomotive Servicing Area;
- (5) Remote Control Derails, and
- (6) Rear End Markers

**1. Inclusion of Contractors.**

Background:

FRA realizes that the regulations need to be amended so that parties who have not traditionally been considered as within the scope of the regulations will now be. The decision to include employees of contractors in the same manner as railroad employees in these regulations is to establish uniformity by applying it to all who may be in danger while performing their duties. The craft or job title of an employee and whether an employee is paid by a railroad or by a contractor engaged by a railroad, is irrelevant when the prevention of deaths and injuries is at stake.

FRA strongly believes that contractor employees are entitled to the same level of safety as railroad employees, and will be equally responsible for compliance with these regulations. Contractors are responsible as employers to ensure that their employees have protection prior to assigning them to work on rolling equipment and to otherwise ensure that their employees have been trained to work safely in the railroad environment.

Current regulations:

**218.5 Definitions.**

... *Worker* means any railroad employee assigned to inspect, test, repair, or service railroad rolling equipment, or their components.. . .

## 218.21 Scope.

This subpart prescribes minimum requirements for the protection of railroad employees engaged in the inspection, testing, repair.. . .

### Suggestions For Consideration:

## 218.5 Definitions.

. . . *Worker* means any **person (including but not limited to a railroad; any manager, supervisor, official, or other employee or agent of a railroad; any owner, manufacturer, lessor, lessee, or independent contractor providing goods or services to a railroad; and any lessor, lessee, or independent contractor)** assigned to inspect, test, repair or service railroad rolling equipment, or their components. . . ,

## 218.21 Scope.

This subpart prescribes minimum requirements for the protection of **workers** engaged in the inspection, testing, repair. . .

## 2. Visibility amendments.

### Background:

The definition of blue signal as defined in 2 18.5 means a clearly distinguishable blue flag or blue light by day and a blue light at night. The blue light may flash or bum steady. When attached to the controls of a locomotive, it need not be lighted if the inside of the cab area of the locomotive is sufficiently lighted so as to make the blue signal clearly distinguishable.

A non-lighted device may not be used at night unless the cab area is adequately lighted and the device is attached to the locomotive controls. A weak blue light or a lighted or unlighted device, obviously inadequate in size, cannot be considered to be clearly distinguishable and therefore, would not comply. A damaged or mutilated blue light or non-lighted blue signal or one that is badly deteriorated could not be considered to be in compliance.

The effectiveness of the blue signal is dependent upon the fact that the device must be clearly distinguishable to the observer.

a) The current regulations state that when a signal is displayed on a controlling locomotive, it must be attached to that locomotive in such a manner that there is no doubt that it is readily visible to an operator seated at the controls of that locomotive. The signal should be placed so that the operator does not have to look for it, like a clamp hanging from the window sill with the

signal positioned low on the carbody of the locomotive. The signal must be immediately visible to the operator without any effort on his part.

b) The blue signal displayed at each end of the rolling equipment may be attached to the ends of the equipment, or it may be displayed on the track ahead and behind the equipment in such a manner that there is no doubt about the track to which it applies.

#### Current regulations:

a) 218.5 Definitions.

Blue signal means a clearly distinguishable blue flag or blue light by day and a blue light at night. When attached to the operating controls of a locomotive, it need not be lighted if the inside of the cab area of the locomotive is sufficiently lighted so as to make the blue signal clearly distinguishable.

b) 218.25 (a) A blue signal must be displayed at each end of the rolling equipment; and... .

#### Suggestions For Consideration:

a) 218.5 Definitions. [Effectively changing 218.25(b), 218.27(e), and 218.29(a)(3) ]

Blue signal means a clearly distinguishable blue flag or blue light by day and a blue light at night. When attached to the operating controls of a locomotive, **it must be readily visible to the engineman or operator seated in the normal operating position at the controls of the locomotive, but** it need not be lighted if the inside of the cab area of the locomotive is sufficiently lighted so as to make the blue signal clearly distinguishable.

b) 218.25 If a blue signal must be displayed at each end of the rolling equipment. **The blue signal must be of sufficient size and height so as to be plainly visible to persons controlling oncoming rolling equipment at a sufficient distance to permit a safe stop prior to passing the blue signal. The blue signal must be displayed in the gage of the track in front of and/or behind the rolling equipment; on the rolling equipment where it is visible to an approaching movement; or on a high-level platform immediately adjacent to the equipment. If the blue signal is displayed in the gage of the track, it must be between the end of the rolling equipment and the first switch providing access to that segment of main track; and...** .

### **3) One Person Crew.**

#### Background:

On September 3, 1993, the AAR filed a petition for reconsideration of the Utility Employee rule, which included the rule's application to single member crews. In the preamble to the final rule, FRA expressed discomfort with single member crews. It was stated that a lone engineer could

not take advantage of the exclusion from blue signal protection unless joined by a utility employee to ensure that the locomotive cab was occupied. **AAR** argued that this was inconsistent with the rule test which defined “Train or Yard Crew” to mean “one or more railroad employees...”.

**FRA’s** Notice of Proposed Rulemaking had requested comments on the protection needed for a single engineer performing helper or hostler service, but chose not to address the subject in rule text due to the lack of initial comments and the presence of railroad operating rules that provide significant protection for one-person crews from unexpected movement of rolling equipment. **FRA** agreed that the rule text did not impose such a restriction on single member crews and therefore granted this portion of **AAR’s** petition for reconsideration on March 10, 1994. **FRA** clarified the issue in an amendment to the rule.

On March 1, 1995, **FRA** published an amendment (Part 218.24) to the final rule on utility employees. The amendment, which was to have gone into effect on May 15, 1995, permitted an engineer working alone as a one-person crew to work within the crew exclusion from the blue signal rule with certain restrictions.

However, in response to comments and petitions received, **FRA** suspended the one-person crew operation amendment in a Federal Register Notice issued on June 9, 1995. In this notice, **FRA** also **re-opened** the comment period on this amendment regarding only the issue of one-person crews, until further notice.

#### Current Interpretation:

In the interim, until a revised rule is issued, **FRA’s** policy on single person crews (for example a locomotive engineer working alone, such as in hostler or helper service) is as follows: (**OP-95-09**):

While on, under or between equipment, no blue signal protection will be required for single person crews, provided that:

- (1) the employee performs only those duties listed in Part 218.22 (c)(5) on the equipment they are called to operate; and,
- (2) the railroad has in effect operating rules and procedures that provide for locomotive **securement** against movement.

Note: Those duties include setting or releasing handbrakes; coupling or uncoupling air hoses and other electrical or mechanical connections; preparing **railcars** for coupling; setting wheel blocks or wheel chains; conducting air brake tests to include cutting air brake components in or out and positioning retaining valves; and inspecting, testing, installing, removing, or replacing a rear-end marking device or end-of-train device.

Suggestions For Consideration:

Reinstate -

**218.24 One Person Crew**

1. Each locomotive in the engineer's charge is either:
  - a. Coupled to the train or other railroad rolling equipment to be assisted; or
  - b. Stopped a sufficient distance from the train or rolling equipment to ensure a separation of at least 50 feet; and
2. Before a controlling locomotive is **left** unattended, the one-member crew shall secure the locomotive as follows:
  - a. The throttle is in the IDLE position;
  - b. The generator field switch is in the OFF position;
  - c. The reverser handle is removed (if so equipped);
  - d. The isolation switch is in the ISOLATE position;
  - e. The independent (engine) brake valve is **fully** applied;
  - f. The hand brake on the controlling locomotive is fully applied (if so equipped); and
  - g. A bright orange engineer's tag (a tag that is a minimum of 3 X 8 inches with the words Assigned Locomotive - Do Not Operate is displayed on the controlling locomotive.

When assisting another train or yard crew with the equipment the other crew was assigned to operate:

1. A single engineer must communicate directly, either by radio or oral telecommunication, with the crew of the train to be assisted.
2. The crew of both trains must notify each other in advance of all moves to be made by their respective equipment.
3. Prior to attachment or detachment of the assisting locomotive(s), the crew of the train to be assisted must inform the single engineer that the train is secured against movement, and must not move the train or permit the train to move until authorized by the single engineer.

**(4) Locomotive Servicing Area.**

Background:

FRA has determined that when certain criteria are present a railroad may safely use different approaches to afford blue signal protection. Basically, those criteria involve slow speeds and the fact that control over the movement of equipment has been placed in the hands of individuals directly responsible for the people who need to be protected. Tracks within a locomotive servicing facility under the exclusive control of mechanical department personnel meet such criteria that permit protection to be provided principally by controlling access to the area. Greater freedom of movement is affected to the mechanical department personnel once a piece of rolling

equipment is placed within this area.

Within a protected locomotive servicing track area, blue signals must be attached to the controlling locomotive whenever workmen are on, under, or between that locomotive. Certain events permit a locomotive that is not blue flagged, within the area, to be moved without removing blue signals displayed at the entrance switches to the area provided. The first event is that a blue signal must be displayed at each switch providing entrance to or departure from the area. Second, each switch providing entrance to or departure from the area must be lined away from movement to the area and locked properly. Third, a blue flag must be attached to each controlling locomotive in that consist in a readily visible position to the operator. To reiterate the allowance not to place a blue flag on each locomotive in a servicing area, the following change is proposed:

Current regulation:

218.29 Alternate methods of protection.

(a)(3) A blue signal must be attached to each controlling locomotive at a location . .

Suggestions for Consideration:

218.29 Alternate methods of protection.

(a)(3) A blue signal must be attached to a controlling locomotive at a location . . .

Current regulation:

218.29 Alternate methods of protection.

(a)(5) A locomotive may be moved onto a locomotive servicing area track after the blue signal has been removed from the entrance switch to the area. However, the locomotive must be stopped short of coupling to another locomotive;

218.29 Alternate methods of protection.

(a)(5)(i) A locomotive may be moved onto a locomotive servicing area track after the blue signal has been removed from the entrance switch to the area. However, the locomotive must be stopped short of coupling to another locomotive;

**(a)(5)(ii) A locomotive not blue flagged, within the area, can be moved without removing blue signals displayed at the entrance switches to the area provided:**

**(1) that the locomotive does not impact or couple to a locomotive on which a blue signal is displayed;**

**(2) that the locomotive is operated by an authorized employee under the direction of the person in charge of the workmen; and**

**(3) only after the workmen on the track have been notified of the movement.**

A further safety enhancement feature has been suggested during the application of this section to a car shop facility instead of a locomotive servicing area -

Current regulation:

2 18.29 Alternate methods of protection.

(b)(4) If operated by an authorized worker under the direction of the person in charge of the workers, a car mover may be used to reposition rolling equipment within this area after workers on the affected track have been notified of the movement.

Suggestions For Consideration:

2 18.29 Alternate methods of protection.

(b)(4) If operated by an authorized employee under the direction of the person in charge of the workmen, a car mover may be used to reposition rolling equipment within this area after workmen on the affected track have been notified of the movement **and all activity has ceased on that track.**

## **5. Remotely Control Derails**

Background:

Current regulations do not specifically refer to remotely controlled derails which are primarily utilized in locomotive servicing areas. It is **FRA's** intention that remotely controlled derails should be treated in the same manner as remotely controlled switches. As such, the operator (employee who has been delegated the responsibility for the proper and safe operation of the control board) is required to; ensure that an effective locking device is applied (forcing the operator to make some special effort to move a protected switch), written records are maintained, and a constant means of communication is available with the employee in charge of the area.

Current regulations:

218.30 Remotely controlled switches.

(a) After the operator of the remotely controlled switches has received.. .

218.27 Workers on track other than main track.

(c) The person in charge of the workers must have notified the operator of any remotely controlled switch that work is to be performed and have been informed by the operator that each remotely controlled switch providing.. .

Suggestions for Consideration:

**218.30** Remotely controlled switches **and remotely controlled derails.**

(a) After the operator of the remotely controlled switches **or remotely controlled derails** has received . .

**218.27** Workers on track other than main track.

(c) The person in charge of the workers must have notified the operator of any remotely controlled switch **or remotely controlled derail** that work is to be performed and have been informed by the operator that each remotely controlled switch **or remotely controlled derail** providing.. .

**6. Rear End Markers.**

Background:

In the absence of a caboose at the rear of a freight train, all crew members are now riding the locomotive consist at the front of the train. Unless that train is equipped with a telemetry device that monitors the condition of the rear end marker, it would be necessary for a train crew member to travel to the rear of the train to inspect the marker. **FRA** permits railroads to use personnel other than train crew members to inspect the rear end marker device to avoid the delay and costs inherent in such a train crew inspection. Non-train crew persons who inspect markers are entitled to blue signal protection.

**After** examining the simple nature of this inspection task, **FRA** reassessed the need for the high level of protection provided by full compliance with the blue signal regulation in the narrow context of this rule. It concluded that, if the tasks were restricted, the locations limited, and effective communications established, it would be possible to sanction an alternative means of protection that was the **functional** equivalent of **full** compliance with the existing rule. The rationale was based in part on the minor nature of the task and the short duration of the person's exposure to risk. **FRA's** alternative protection methodology, which requires that the person occupying the cab compartment of the controlling locomotive have an effective communications link to the inspector, assures the inspector that the train is secure against movement and will remain that way until the inspection has been completed.

In **FRA's** judgment, this alternative provides the inspector with the same status and protections as a member of the train-crew and, for the same reasons, so minimizes the risk of injury that it is appropriate to authorize the inspection without blue signal protection. Due to the pertinence of this regulation to the blue signal regulation, it has been suggested to remove the following section from Part **221.16** and establish a new section in Subpart **B - Blue Signal Protection of Workers**, **218.28 -**



Current Regulation:

**221.16 Inspection procedure.**

(b) In order to establish the alternative means of protection under this section for inspection or

Suggestions for Consideration:

**218.28 Rear end marker/end of train device procedures.**

(a) Prior to inspecting, testing, installing, removing or replacing a rear end marking device or end of train device, a non-train crew person shall determine that he is being protected against the unexpected movement of the train either under the procedures established in Part 218 of this chapter or under the provisions of paragraph (b) of this section.

(b) In order to establish the alternative means of protection under this section for inspection or testing purposes, (1) the train to be inspected shall be standing on a main track; (2) the inspection task shall be limited to ascertaining that the device is in proper operating condition; and (3) prior to performing the inspection procedure, the inspector shall personally contact the locomotive engineer and be advised by that person that they are occupying the cab of the controlling locomotive and that the train is and will remain secure against movement until the inspection has been completed.

(c) In order to establish the alternative means of protection under this section for installation, removal or replacement purposes, (1) the train on which the device is to be installed, removed or replaced shall be standing on a main track; (2) prior to installing, removing or replacing the device the employee shall communicate directly with the locomotive engineer assigned the controlling locomotive of the train and be advised by that person that they are occupying the controlling locomotive and that the train is and will remain secure against movement until the task has been completed; (3) the locomotive engineer shall make an automatic train air brake application of at least 20 pounds to ensure the train does not move.

Suggestions for Consideration:

**Delete 221.16**

This alternative inspection method was originally limited to *main track*, which according to the definition of *main track* in 221.5(d) states: “. . . a track, other than an auxiliary track, extending through yards or between stations, upon which trains are operated by timetable or train order or both, the use of which is governed by a signal system”. It was thought that only on main track that the operating rules served to prevent other trains from occupying the track where the person needing protection was stationed. It has been recommended that since the intent of controlled sidings and/or running tracks controlled by a signal system is to afford the same protection as a main track, the new 218.28 should include -

Suggestions for Consideration:

218.28 Rear end marker/end of train device procedures.

(b) In order to establish the alternative means of protection under this section for inspection or testing purposes, (1) the train to be inspected shall be standing on a main track, **controlled siding, and/or any track controlled by a signal system...**